PART I

Are Vaccines Killing Your Pet?

RENEE STOCKDALE

The debate over the safety and efficacy of animal vaccines continues to rage between veterinarians, manufacturers and pet owners.

BY KAREN DALE DUSTMAN

MOVE OVER, POLITICS, RELIGION AND GUN CONTROL for the latest "hot" topic of debate: Can routine vaccinations harm your pet?

Even raising the issue may seem a bit like questioning the virtues of motherhood and apple pie. Vaccinations are, after all, among the most prominent weapons in veterinary arsenals today against devastating diseases including rabies, distemper, parvovirus and leukemia.

However, critics point out, medical science also once considered leeches de rigueur. And more and more holistic practitioners are reporting cases in which they believe over-vaccination may be linked to a wide assortment of veterinary ills.

More conventionally minded health professionals acknowledge that vaccines, like any form of medical intervention, can have side effects in rare instances. But, they say, the benefits of vaccination usually far outweigh the risks. In holistic practices, less is definitely considered better.

Who's right? Conclusive data isn't in yet, but there seem to be valid points raised by both sides. Here's a look at this thorny but fascinating debate.

TROUBLE IN PARADISE?

For Don Hamilton, D.V.M., a holistic veterinarian in Ocate, New Mexico, the turning point was a Persian cat named Fluffy with a puzzling pattern of repeated urinary tract infections.

"I read through her chart and found that for three years in a row, she would come in for her annual vaccination, and about a month later, would be back with a urinary tract infection," explained Dr. Hamilton.

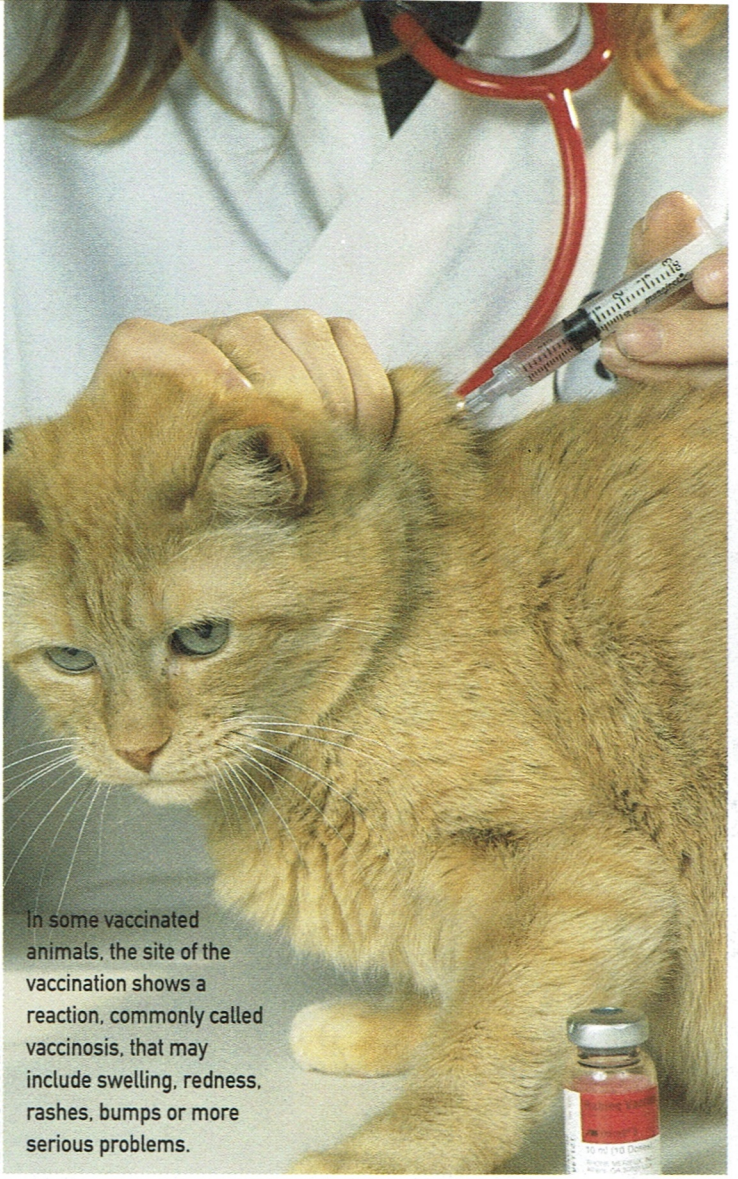
RENEE STOCKDALE

Veterinarians agree that vaccinations can cause a variety of problems in vaccinated animals. However, they disagree as to the breadth and severity of these reactions.

Suspecting that Fluffy's annual vaccinations may have played a part in her problem, Dr. Hamilton recommended that the cat not receive further vaccinations. Fluffy has remained infection-free ever since, he noted.

Some might call it a coincidence. For Dr. Hamilton, however, the idea that routine vaccinations may be linked to seemingly unrelated illnesses was a significant insight.

"Once you see something like that and say, is it possible, and then look through your cases with the idea that it is possible, then you see a lot of things you didn't see before," Dr. Hamilton said. "The trouble is that we're so heavily taught that vaccines are helpful, and if not helpful, that they're at least not harmful. So when you see what I now think are vaccine-related damages, you tend to say it's not possible, and dismiss it."



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In some vaccinated animals, the site of the vaccination shows a reaction, commonly called vaccinosis, that may include swelling, redness, rashes, bumps or more serious problems.

Reports of vaccine-related problems in animals come as no surprise to Richard Pitcairn, D.V.M., founder of the Academy of Veterinary Homeopathy in Eugene, Oregon, and one of the first to point to a possible correlation between vaccines and other illnesses.

"We do see a number of health problems that we associate with vaccines, [often] having to do with immune problems or allergies," confirmed Dr. Pitcairn. "It also seems that animals become more susceptible to other infections, so a cat that gets the feline leukemia vaccine might come down a month later with FIP (feline infectious peritonitis). There is some evidence reported in the veterinary literature that after a vaccine, the immune system weakens or the animal is more susceptible to diseases of other sorts."

The link between vaccinations and the immune

VACCINES: A Short Primer

Edward Jenner probably had no idea he was spawning a medical revolution when he inoculated an 8-year-old boy with the relatively benign cowpox virus in 1796, then confirmed the boy's immunity to smallpox.

However, the principle used by this observant British country doctor has led to the development of today's human vaccines for diphtheria, polio, whooping cough and measles, as well as animal vaccines against rabies, distemper, parvovirus and other diseases.

Vaccines are produced by taking a virus or other disease-causing agent, known as a *pathogen,* and either killing it or rendering it less dangerous by culturing it under prescribed conditions in a lab. These killed or "modified-live" organisms, known as *antigens,* are then incorporated into a vaccine solution. Killed vaccines may also include chemicals known as *adjuvants,* which enhance the immune-producing action of the vaccine.

"When injected with a vaccine, the animal's immune system is forced to create a response—just as if it had been exposed to the disease," explained Dr. Hustead of Ft. Dodge Animal Health. "Through the process of creating this response, the animal learns how to deal with the more pathogenic versions of the same organism."

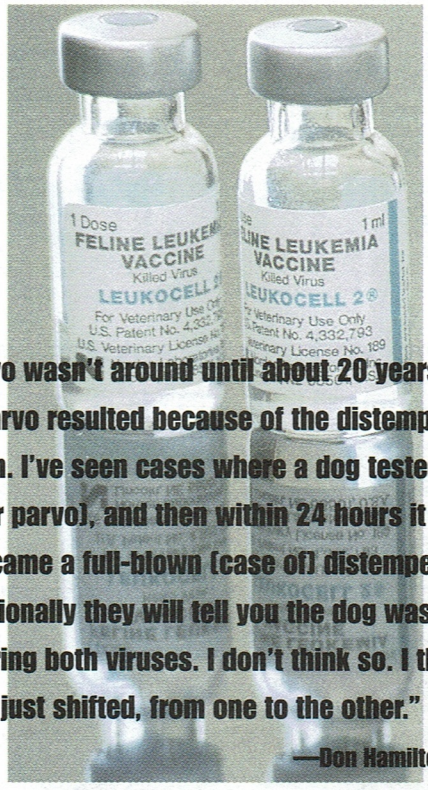
The type of vaccine that is preferable—killed or a modified-live—is at the heart of a significant controversy in the medical community. Typically, modified-live vaccines require a lower concentration of antigens and produce a longer-lasting immunity than a killed vaccine. However, because a modified-live vaccine contains live (if attenuated) organisms, there is a remote, but real, possibility that these organisms can mutate into a disease-causing form. Killed vaccines avoid this potential risk, but often must be administered several times to produce an adequate immune response. In addition, the adjuvants incorporated into some killed vaccines may themselves be responsible for adverse reactions in some animals.

Scientists are also showing increasing interest in *recombinant* vaccines, which use only a genetic fraction of the disease-causing organism—enough to stimulate an immune response, without the remainder that is responsible for causing the disease. Researchers hope that these new technologies will prove even safer than today's vaccines, while offering equal or better protective results.

system is cited by other veterinarians as well, although some caution that immune problems may involve more factors than just vaccination. "We're seeing more immune problems in general," noted Jean Dodds, D.V.M., a veterinarian with a referral practice in hematology and immunology in Santa Monica, California. "It's likely that vaccinations are just one of the triggers in individuals that are susceptible."

Many holistic veterinarians also report that their observations in practice seem to support a link between vaccinations and a wide variety of ailments. "You take healthy animals and often very quickly after you vaccinate, you can see simple things like itching of the skin or excessive licking of the paws, sometimes even with no eruptions," said Dee Blanco, D.V.M., a holistic practitioner in Santa Fe, New Mexico. "We see a lot of epilepsy, often after a rabies vaccination. Or dogs or cats can become aggressive for several days. Frequently, you'll see urinary tract infections in cats, often within three months after their [annual] vaccinations. If you step back, open your mind and heart, you'll start to see patterns of illness post-vaccination."

Vaccinations may even contribute to premature death in animals whose immune systems were already compromised, according to some veterinarians. "I experienced two situations in which we had spent a long time building up two older, severely immunocompromised dogs, and then their owners had them vaccinated for just about everything known to man," recalled Carvel Tiekert, D.V.M., executive director and founder of the American Holistic Veterinary Medical Association headquartered in Bel Air, Maryland. "Both of those dogs died within about a month of vaccination. Can we prove a cause and effect? No. Do I think there was a cause and effect? Yes."



"Parvo wasn't around until about 20 years ago. I think parvo resulted because of the distemper vaccination. I've seen cases where a dog tested positive (for parvo), and then within 24 hours it turned and became a full-blown (case of) distemper. Now, conventionally they will tell you the dog was simply harboring both viruses. I don't think so. I think it just shifted, from one to the other."

—Don Hamilton, D.V.M.

MORE SUBTLE EFFECTS:

In addition to—or perhaps underlying—the more overt symptoms, some veterinarians believe that vaccinations can produce a chronic illness known as "vaccinosis," which leaves the patient less able to fend off other medical problems.

"Animals react adversely to vaccines in two main ways. The first is the more obvious immediate anaphylactic response, where the animal may develop swelling of the face or ears, as well as pain and inflammation at the site of injection," said Donna Starita Mehan, D.V.M., a veterinarian in Boring, Oregon. "But a larger number of animals develop an undercurrent, [a] subtle immune system shift that compounds every time they receive a vaccination. This may later manifest as any number of chronic degenerative illnesses such as arthritis, skin or ear problems, gum or throat inflammation, behavior problems, central nervous system disorders (i.e. epilepsy) or cancer."

The link between vaccination and disease, however, is an indirect one, explain those who accept the vaccinosis theory. "It is not necessarily that the diseases are caused by the vaccine," emphasized Dr. Blanco. "There are weaknesses inherent in all of us, either from our environment or from acquired or inherited tendencies. If you have a family line of diabetes or hip dysplasia, or whatever your weak area is, the vaccine will essentially exacerbate the weakness and the animal becomes symptomatic. I think the immune system is finite, and overloading it [with too many

Reporting An Adverse Reaction

What should you do if your pet suffers a vaccine-induced reaction? If the emergency happens at home, your first call, of course, should be to your veterinarian. Afterward, however, reporting the problem may help other pet owners avoid a similar ordeal. According to Brian J. Erdahl, D.V.M., senior biologics specialist with the U.S. Department of Agriculture's Biologics Hotline, owners of pets that have a negative reaction to any vaccine should promptly notify the Biologics Hotline and the manufacturer of the vaccine.

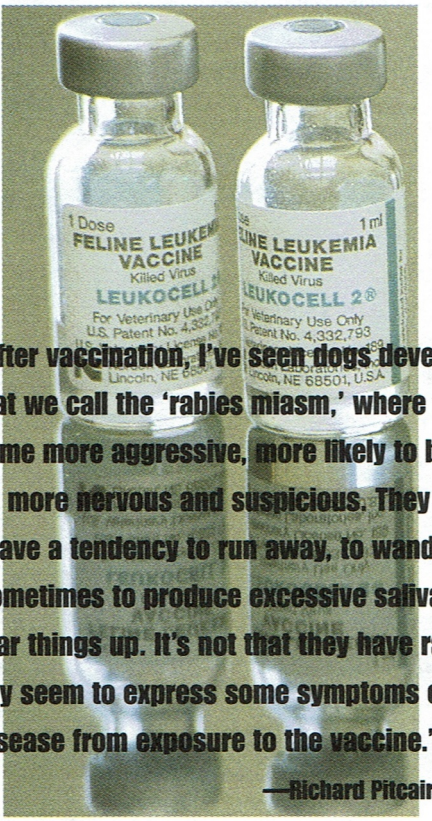
"We get reports from consumers, from universities, from veterinarians through the AVMA's Practitioners' Reporting Network, and occasionally by referral from the FDA," Dr. Erdahl explained. "We compile that data, and we keep a database of reports on products."

Not every adverse reaction is considered indicative of a problem with the vaccine itself, Erdahl noted. "We expect a certain amount of reactions; it's just inevitable," he said. "When we get nervous is when one person gives us information on a reaction to a particular product, and the next day we get a report with the same information, from the same batch. Then we say, is this something going on with the product, or is this the baseline reaction we expect? If we think a product may have a problem, we can and will require [additional] testing of it."

Consumers may contact the USDA Biologics Hotline toll-free at (800) 752-6255. A specialist will ask you the name of the vaccine, the manufacturer, and the lot number of the product. Pet advocates also recommend making sure that your pet's adverse reaction and vaccine information (including manufacturer and lot number) are clearly noted on your veterinarian's chart.

vaccinations] is really hard on the system. The immune system says to itself, 'These rabies or other viruses in my body are a life-threatening illness—I must deal with this,' but there isn't enough energy to also keep everything in balance. Therefore, the weaknesses are expressed."

The rabies vaccine, in particular, is frequently linked by holistic veterinarians to adverse changes in dogs' behavior. "What I've seen happen is, after vaccination, dogs develop what we call the 'rabies miasm,' where they become more aggressive, more likely to bite and more nervous and suspicious," noted Dr. Pitcairn. "They may also have a tendency to run away, to wander, and also sometimes to produce excessive saliva and to tear things up. It's not that they have rabies, but they seem to express some symptoms of the disease from exposure to the vaccine."



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Some veterinarians even suggest that illnesses such as parvo may be the direct result of well-intentioned vaccination efforts. "Parvo wasn't around until about 20 years ago," Dr. Hamilton noted. "I think parvo resulted because of the distemper vaccination. I've seen cases where a dog tested positive [for parvo], and then within 24 hours it turned and became a full-blown [case of] distemper. Now, conventionally they will tell you the dog was simply harboring both viruses. I don't think so. I think it just shifted, from one to the other."

LOOKING FOR LINKS

What exactly in a vaccine might promote such adverse reactions? "Vaccine products may contain artificial colors, antibiotics, aluminum, formaldehyde, BHA and BHT, in addition to the viral antigen," noted Dr. Mehan. "Syncytial [a multinucleate mass of protoplasm resulting from a fusion of cells] viruses inadvertently grown on the same media may also be included as contaminants," she said.

Other experts note that most vaccinations introduce a substance directly into body tissues, rather than through the nose or mouth, which are the normal routes of infection. Repeated vaccinations may also produce a cumulative impact on the immune system, they say.

Even some experts outside the holistic community believe that Americans may be over-vaccinating their pets. "Almost without exception, there is no immunologic requirement for annual revaccination. Immunity to viruses persists for years or for the life of the animal," wrote Ronald D. Schultz, Ph.D., a professor and chair of the Department of Pathobiological Sciences at the University of Wisconsin School of Veterinary Medicine, who has studied vaccines for nearly 30 years. In a widely quoted article that was co-authored with T. Phillips, D.V.M., and published in *Kirk's Current Veterinary Therapy* in 1992, Drs. Schultz and Phillips called the practice of annual boosters one of "questionable efficacy."

Our own experience with human vaccinations tends to support that idea, notes Christina Chambreau, D.V.M., a veterinarian with an entirely homeopathic practice in Sparks, Maryland. "How many of us get DPT, polio, tetanus, diphtheria—all the childhood vaccines—every year?" she asked. "If *you* don't, why do your *animals* need them?"

ON THE OTHER HAND

Not so fast, caution more conventionally minded veterinarians. There are significant differences between humans and animals—and between human and animal diseases—that need to be factored in.

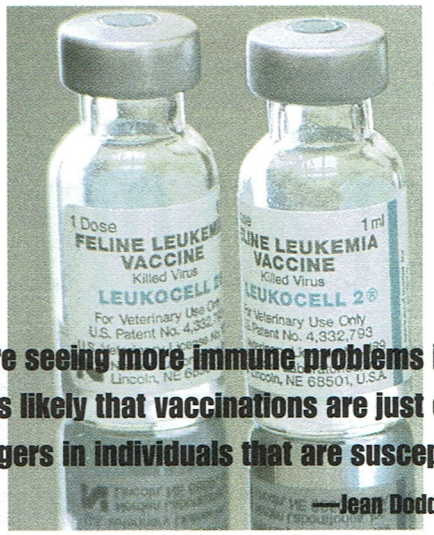
"Remember that dogs age 7 times faster than we do," said Roger Schwartz, D.V.M., a clinical research veterinarian with manufacturer Hoechst Roussel Vet in Somerville, New Jersey. "One year for us is the equivalent of a month and a half for a dog. So a yearly booster for them is like a seven-year booster for us.

Although annual revaccination may sound a bit like overkill, that's not necessarily the case, some experts emphasize. "Manufacturers' label recommendations for the frequency of revaccination are meant to provide guidance for the general population of animals," Beth Bielsker, D.V.M., manager of veterinary affairs for Solvay Animal Health in Mendota Heights, Minnesota. "Are there going to be some animals in which protection lasts longer than a year? Yes, just as there will be animals where protection may be less than a year. It is very difficult to make generalizations in an area where the response to vaccine is very individualized," she said.

A number of factors can inhibit the development of a proper immune response, making repeated vaccinations important to ensure immunity, states Joseph Curlee, D.V.M., a veterinarian with United Vaccines Inc., in Madison, Wisconsin. "Although animals are 'vaccinated,' it does not infer that they have produced a protective immune response," Dr. Curlee said. "Several factors to consider at the time of vaccination of the animal are stress, pre-existing or incubating disease, poor nutrition, parasitism, immune suppressive diseases or treatments, and age (maternal antibody interference). Any one of these factors may result in an inadequate immune response to the vaccine, which may require additional vaccinations in order to insure that the animal is protected."

Some may speculate that vaccine companies prefer to market a product that must be readministered every year,

however, according to Dr. Schwartz, it is actually in vaccine companies' own interest to produce longer-lasting vaccines. "If a company can sell a product that lasts two years between doses and the others on the market last one year, guess who's going to win the race. There's always a push to lengthen the interval, because that means you have a more potent product."



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However, even traditional veterinarians agree there may be a limit to the number of vaccinations an animal should receive. "The reality is, yes, a vaccine does cost the animal something—it costs them a little bit of their metabolic energy to produce a response to that vaccine," observed Dr. Schwartz of Hoechst Roussel. "Animals and people are born with essentially a limitless potential to develop immunological responses to antigens, [but] that 'limitless' part refers to the variety of antigens that the animal can respond to. The animal's metabolic ability has limits. It's like your computer at home—how many software programs can you put on it? Your hard drive has a certain capacity. If you have only 640 megabytes compared to several gigabytes, for example, you may have to be more selective about what you put on it. But remember, it is the software that makes a computer useful."

TOUGH TIE-INS

Establishing that an animal's health problems are vaccination-related can be difficult, holistic veterinarians concede. "Those of us in alternative therapy feel strongly that there are such problems, but that is based on in-the-field observation," noted Carolyn Blakey, D.V.M., an alternatives practitioner in Richmond, Indiana. "The drug manufacturers and most non-alternative veterinarians deny that, because the reactions [to vaccinations] are delayed—quite delayed, frequently. So they say, 'Where's the proof that the vaccine did it?' And they have a valid point, of course. But once in a while, often enough that you can put your finger on it, within a few days or a month [after vaccination], you can correlate a deterioration in the animal's health."

Vaccinations are also only one in a constellation of factors that may affect an animal's health, holistic practitioners emphasize. "I don't want to imply that [vaccination] is the whole cause," cautioned Dr. Pitcairn. "More, it aggravates or makes [an existing condition] worse. Maybe there is an inherited tendency toward allergies, and then along comes the vaccine, or several together, and it's too much."

Conventional veterinarians point out, however, that the very frequency of a typical vaccination program makes it easy to mistakenly blame a vaccine. "For pediatric disease, for instance, it's very common in veterinary practice to vaccine puppies on a three- to four-week interval, from the time they are 6 weeks of age until they are 16 weeks old," pointed out David Hustead, D.V.M., director of professional services for Ft. Dodge Animal Health in Overland Park, Kansas. "Now, if a puppy gets any illness from the time they are six weeks of age to 16 weeks, that illness is within three weeks of the date they got a vaccine. So it is very easy to say it had to be caused by a vaccine."

Vaccines may also be inappropriately blamed for adverse reactions simply because underlying conditions went undiagnosed, noted Dr. Bielsker of Solvay Animal Health. "There are many reasons why an animal may occasionally become ill after vaccination, most of which are not directly related to the vaccine that was used," Bielsker said. "Often, the animal may have had an underlying condition, such as kidney disease or heart disease, at the time of vaccination, which causes it to become ill. However, the public may only hear bits and pieces of what happened, and the true cause of the problem is oftentimes never communicated. Am I saying that vaccines themselves are never to blame for complications that may occur? No. What I am saying is that, in my experience, it is very rare."

As for the assertion that vaccination may lead to chronic illnesses, many outside the holistic community find the notion a tough concept to swallow without further proof. "These are very difficult questions. The problems these people report are so vague they almost defy typical scientific efforts to investigate," said Dr. Hustead.

"The data is not there at this time to back up the contention [that vaccines may cause low-grade, chronic illness]," agreed Philip Kass, D.V.M., Ph.D., a researcher with the Department of Population Health & Reproduction at the School of Veterinary Medicine at the University of California at Davis. "I'm not saying it's false, but I'm not saying it's true either. I just don't think the hard evidence is there yet."

"The immune system puts computers to shame [in complexity]," cautioned Dr. Schwartz. "The simple answers are always the easy ones, but they're almost always the wrong ones."

Many holistic veterinarians, however, with their focus on the comprehensive, underlying, long-term causes of disease, remain convinced that the connection between vaccination and other animal health problems is real. "It's happened often enough to make us feel, sure enough, [it's true]!" said Dr. Blakey. "But not often enough to make the 'scientific' community accept our interpretation as completely valid, because it is observation, and that's not a scientific study."

OTHER REACTION RISKS

While there's no proof at present of a link between vaccination and chronic illness, vaccines have been known to produce several types of negative reactions in animals. It is accepted that vaccines do sometimes cause what are termed 'acute' (sudden, short-course) reactions in a small number of cases. Within a few minutes or hours after the injection, an animal may develop swelling at the site, fever, vomiting, anaphylactic shock or even seizures. Left untreated, the animal may die.

The risk that an animal will have this type of a severe reac-

tion to a vaccine is extremely small, experts emphasize. "For vaccines to be licensed, they must meet USDA standards to show they are safe and protective at or above a given threshold level," explained Dr. Schwartz of Hoechst Roussel. "Generally, only fractions of one percent of [the population of] animals will respond adversely."

Just as a small percentage of humans experience life-threatening response to a bee-sting, an animal's response to a particular vaccine depends on the individual pet's own unique chemistry. "You and I can both receive the same vaccine, and you may not have a problem at all and I may start breaking out in hives," explained Dr. Bielsker. "Does that mean the vaccine is bad? I don't think so. Your immune system processed it normally and mine sort of superprocessed it."

There is also a small risk that vaccinated animals may not be adequately protected against the disease for which the vaccination was given, acknowledged Dr. Schwartz. "Vaccines don't have to be 100 percent protective, or we wouldn't have any vaccines because there's nothing foolproof," he noted. "Generally, the efficacy rate is well above 90 percent, but in some cases it may be in the 80-percent range. The degree of protection is a function of the nature of the vaccine, the nature of the disease it protects against, the length of time since the last exposure to the vaccine or disease agent, and the individual animal's ability to develop a protective response, once immunized."

Recent research has also linked certain feline vaccines with injection-site fibrosarcomas, a type of cancer. "Our research confirmed that there was a relationship between giving vaccines and developing tumors in cats," said Dr. Kass. "Two vaccines seemed to be causing it the most: feline leukemia and rabies, [regardless of the brand being given]. We also found that cats that had received multiple injections in the same place had a higher risk than cats with only one vaccination there."

Despite the link with vaccines established by his research, cat owners should not jump to conclusions, Dr. Kass cautioned. "Not all vaccines cause fibrosarcomas, and not all fibrosarcomas are caused by vaccines," he emphasized.

BREED-SPECIFIC REACTIONS

You may also have heard that purebred animals are at greater risk for developing an acute vaccine reaction. Is that true? "Absolutely," noted researcher Dr. Schultz. "But what's even more true is that certain families, certain lines of genetics within a breed are more susceptible than others. It's not a simple Mendelian thing, however—it's multi-genic and highly complex. So one parent could have [a vaccine sensitivity], and the progeny could still be without it."

Among dogs, breeds at highest risk of an adverse vaccine reaction include Akitas, Weimaraners and harlequin Great Danes, noted Dr. Dodds. "[These breeds] have highly genetically predisposed blood lines," she explained. "That is, within the breed, there are very commonly bred lines that apparently have this susceptibility."

In addition, some individual animals within a certain breed may produce a lesser immune response to a vaccine than others. "Clearly, all dogs within a particular breed—Rottweilers are prominent examples—simply

don't respond equally to vaccines; some dogs may not seroconvert (i.e., develop antibodies in response to vaccination) until 2 years of age or older," said Richard Ford, D.V.M., a professor of medicine at the College of Veterinary Medicine at North Carolina State University. "And of greater concern, we know that immunization failure is more likely to be the result of the individual's inability to respond to the vaccine than it is a failure of the vaccine's ability to immunize."

Such breed-specific results are understandable, noted Dr. Schwartz. "There is a thing called hybrid vigor; the hybrid mongrel animals in this world tend to have fewer quirks when it comes to [responses to vaccines] than purebreds," explained Dr. Schwartz. "That's because their family tree is a forest. When you breed in certain traits, there may a whole lot of other things thrown in, including insufficient immune responses. That's one of those trade-offs [in buying a purebred animal]."

CONCLUSION

The wisdom of current vaccination protocols—especially of annual revaccination for every animal—is clearly being called into question. (The next issue of *Natural Pet* will feature Part II of this story, in which we'll take a look at what some experts recommend as alternatives.)

However, even some of the most outspoken critics of the way we currently vaccinate our pets stress that their position should not be misconstrued. "There have been so many things said recently about vaccines in a negative context that I'm beginning to worry now that we have animal owners who are very confused, and some are very scared," emphasized Dr. Schultz. "Animals shouldn't necessarily be vaccinated every year—it's something I've stated since 1978. But some folks who are into holistic veterinary medicine have taken the view that you don't need any vaccines, and [in my opinion] that's absolutely not correct."

As with most health tools, vaccines serve a valuable purpose if used correctly. "Everything sort of has its day, things come and go, wax and wane," points out Dr. Tiekert. "Are people overreacting? I don't know. In my own opinion, perhaps a little bit. But then, American society has never done real well staying in the middle."

Clearly, the issues are difficult ones; there are no easy answers, but there are many good sources of information. Perhaps the best place to begin is by talking about the issue of vaccination with your own veterinarian. "Maybe it's worth discussing it with two veterinarians to try to get a point-counterpoint," suggested Dr. Schultz. "And I can assure you, if you discuss this issue with both an allopathic and a homeopathic veterinarian, they will have a view and counterview for you."

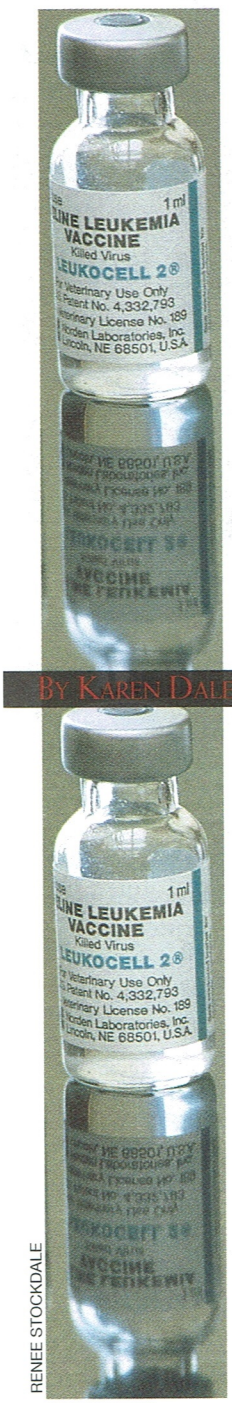
"I would encourage everyone to be really persistent consumers," advised Dr. Blakey. "I want them to keep their brain cells plugged in, ask hard questions, and ask them from more than one source. There are some wonderful books out there—pick them up and read them. It's an education issue." **NP**

Karen Dale Dustman is a freelance writer based in Northern California who frequently contributes to Natural Pet *magazine.*

PART 2

To Vaccinate or Not?

Our experts recommend when and how often to vaccinate your pet.



RENEE STOCKDALE

BY KAREN DALE DUSTMAN

IN PART I OF THIS ARTICLE, WE EXAMINED THE NOTION THAT common veterinary vaccines may be linked to a wide assortment of medical ills in our pets. The controversy is multi-sided; there are no easy answers. For those concerned that we may be over-vaccinating our pets, what are the alternatives?

Here again, viewpoints run the gamut. Some animal enthusiasts opt to refrain from vaccinating their pets entirely. Others are re-examining vaccination protocols, vaccinating against fewer illnesses and at greater intervals. Still others are incorporating homeopathic preparations known as nosodes into their animals' preventive health care as an adjunct to—or even a replacement for—traditional vaccination.

THIS SIDE OF NEVER

Celeste Yarnall first felt a twinge of suspicion as she watched four tiny Tonkinese kittens struggle for life just hours after receiving their first vaccination. Over the next few years, as she saw other cats develop asthma, vaccination-site sarcomas and hair loss, Yarnall became increasingly convinced that vaccinations were the root of many of these animals' health problems.

"One of my cat's paws blew up like boxing gloves; I know of kittens that have died immediately following their shots, or have gotten the diseases they were suppposedly trying to prevent," said Yarnall, a professional breeder and author of the book *Cat Care Naturally*. "They'll call my information anecdotal, but this is my fourth generation of breeding cats wit hout vaccinations. I [my cats] don't have fleas, fungus, parasites, feline infectious peritonitis or feline leukemia—the worst we've had is a cold."

Yarnall may be more outspoken than many, but she is hardly alone in her refusal to vaccinate her animals. "I know a lot of breeders who don't vacci-

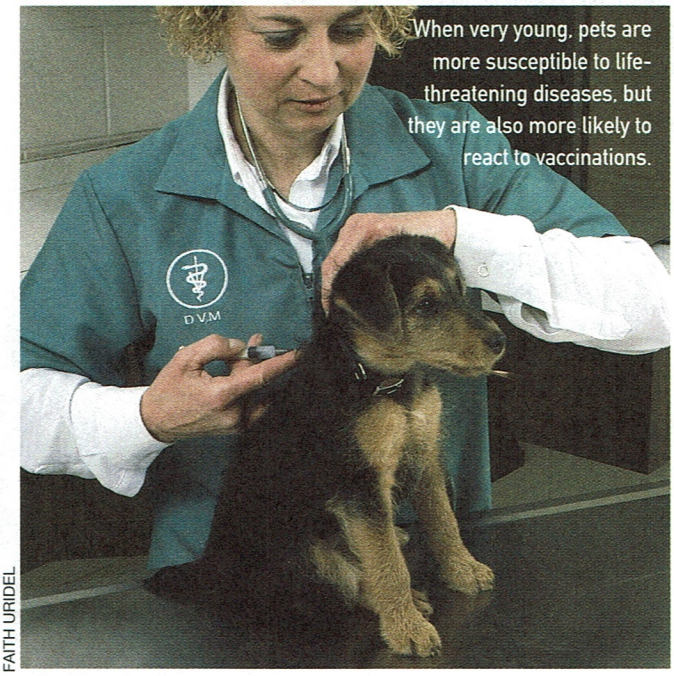
RENEE STOCKDALE

Some veterinarians recommend varying the site of vaccination injections. The FIP vaccine is said to be more effective when given through the nasal passages.

nate any more and are afraid to tell you, and vets who may vaccinate their clients' animals but don't vaccinate their own, and are afraid to tell you," she said.

"Many of my clients refuse to give vaccines to horses," confirmed Donna Starita Mehan, D.V.M., a holistic veterinarian in Boring, Oregon. "And they tell me they have never raised animals so healthy, with so few behavior or reproductive problems, lamenesses. In the field, my observation is [that] the more you limit vaccinations, the healthier the animals."

Dee Blanco, D.V.M., a holistic practitioner in Santa Fe, New Mexico, also rarely recommends that her clients vaccinate their animals except in high-risk situations, and then with what she describes as "a very circumscribed use of specific vaccines. Animals have been surviving for thousands and thousands of



When very young, pets are more susceptible to life-threatening diseases, but they are also more likely to react to vaccinations.

FAITH URIDEL

years without [vaccination]," she emphasized. "The assumption here is that we know how to prevent disease, and it's really the body that knows—and given half a chance, it will."

For Yarnall and others who share her views, the choice is clear. "Do you think the god or goddesses who designed our immune system did it wrong?" asks Yarnall. "I'll take my chances against acute disease. I would not vaccinate anything I loved."

EXPLORING THE MIDDLE GROUND

Not everyone, of course, is willing to go as far in rejecting traditional medicine—a wide and fertile middle ground is now being explored, as other practitioners develop their own variations on traditional vaccination protocols.

The once virtually unquestioned practice of revaccinating animals annually has been receiving some of the heaviest recent scrutiny. Thanks in part to pioneering research by Ronald D. Schultz, Ph.D., professor and chair of the Department of Pathobiological Sciences at the School of Veterinary Medicine at the University of Wisconsin, more veterinarians are now questioning the advisability of this approach.

"Basically, there's no information or evidence that would indicate we need to do routine vaccinations for dogs and cats on a yearly basis, and in fact, all the information we have is just the opposite," explained Dave McCluggage, D.V.M., a holistic veterinarian in Longmont, Colorado. "The whole theory of vaccines would indicate when you given them, they're good for years or life."

Other common vaccination practices are also undergoing scrutiny. Some practitioners, for example, now recommend against the multi-valent (combination) vaccines, which they feel may increase the chances of an adverse reaction, and advocate instead a series of single-antigen vaccines. Other experts suggest that each vaccination be administered in a different part of the animal's body—to help identify the culprit in case of a reaction and to minimize the likelihood of injection site complications. "The American Association of Feline Practitioners has recommended that the FVRCP [feline viral rhinotracheitis, calici and pneumonitis combination] vaccine be given in the shoulder, leukemia vaccine in the left rear leg and rabies vaccine in the right rear leg," notes Philip Kass, D.V.M., a researcher in the Department of Population, Health & Reproduction at the University of California, Davis School of Veterinary Medicine. "Based on our work [with injection-site sarcomas in cats], we're recommending that people not give multiple vaccines in the same location."

The timing—and spacing—of vaccinations may also deserve reconsideration, experts emphasize. "I'm recommending a changed vaccination schedule [to my clients]," said Richard Pitcairn, D.V.M., Ph.D., a noted holistic veterinarian and founder of the Academy of Veterinary Homeopathy. "There are two major problems, assuming you choose to vaccinate. The first is vaccinating the animal too young, before its immune system is really ready for it, which is a common practice. The other is giving all the vaccines together, which I think is too much. It overwhelms the immune system, which didn't evolve to handle that many [antigens] at once."

"I do not advise my clients to use any of the vaccines traditionally used in young animals—that is, panleukopenia, upper respiratory disease and parvovirus—in animals over a year old," agreed Dr. Blanco. "Where diseases like these pose the greatest risk is when the animal is young and its immune system is immature. Once the animals reach puberty, you've got a pretty good resistance to these things, and it's really superfluous to be vaccinating for them."

PICKING & CHOOSING

In addition to such familiar vaccines as rabies, parvovirus and distemper, modern research has led to a stunning—and growing—array of vaccines for other diseases. Your cat can be vaccinated for chlamydia; and your dog can be immunized for leptospirosis, Lyme disease and kennel cough, among others.

Despite the burgeoning array of new vaccines, more is not necessarily better, some experts caution. A growing number of veterinarians suggest that animals be vaccinated against only the most devastating diseases. "I do not recommend vaccination as a general rule," emphasized Don Hamilton, D.V.M., of Ocate, New Mexico. "[But] if my clients are concerned and they feel there is a strong risk, I only recommend vaccinating for distemper and parvovirus in dogs, and one vaccination for each. And of course, the rabies vaccination is required by law."

Some veterinarians now recommend against vaccines they feel are not particularly effective. "We never give feline

DR. SCHULTZ'S RECOMMENDED VACCINATION SCHEDULE

These charts are reprinted with the kind permission of Dr. Ronald D. Schultz, professor and chair, Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin-Madison. The vaccination program outlined here is the minimum vaccination program Dr. Schultz recommends for all dogs and cats to control infectious diseases in these species. "Vaccination programs are much more effective in controlling the spread of infectious diseases if a large number of animals can be vaccinated a few times during their lives, rather than a few animals being vaccinated many times as is currently done," stated Dr. Schultz. Remember, any vaccination program should be tailored to the animal; you and your veterinarian are in the best position to decide on the most appropriate vaccination program for your pet, Dr. Schultz emphasized.

DOGS

Age at First Vaccination	Recommendation
6 to 8 weeks of age (I do not recommend routine vaccinations at an earlier age.)	**1st vaccination**: • Canine distemper (CDV) and • Canine parvovirus (CPV) only **2nd vaccine (2 to 3 weeks later):** • Canine distemper (CDV) and • Canine parvovirus (PCV) only **3rd vaccination :** • Canine distemper (CDV) • Canine parvovirus (PCV) • CAV-2 • Intranasal canine parainfluenza and Bordetella bronchiseptica (CPI/Bb) and • Rabies (RV)
9 to 14 weeks of age	**Omit the first dose or CDV and CPV, and follow 2nd and 3rd vaccination set as listed above.**
Older than 14 weeks of age	**One dose**: • Canine distemper (CDV) • Canine parvovirus (CPV) only • CAV-2 • Intranasal canine parainfluenza and Bordetella bronchiseptica (CPI/Bb) [2] and • Rabies (RV) [1]
1 year of age	**Give vaccination set as listed for older than 14 weeks.**
3 to 4 years of age	• Intranasal canine parainfluenza and Bordetella bronchiseptica (CPI/Bb) [2] • Rabies (RV)
6 to 7 years of age & 9 to 10 years of age	**Give vaccination set as listed for 3 to 4 years of age.**
12 years or older	**Revaccinate annually with all componenets of the vaccines. (3rd vacc. set).**

NOTES: 1. Administer at a separate site (intramuscular rabies vaccine preferred). 2. Administer if the dog is boarded, goes to shows or is a kennel dog. **CCV:** I do not recommend using canine corona virus (CCV) at any age, but I believe if you do use CCV, you need only give it up to 12 to 14 weeks of age (older dogs would never need CCV). **Lyme:** I do not recommend Lyme disease vaccine because of concerns about efficacy and safety. If the dog should develop the clinical disease, which is rare, treat it with antibiotics. **Leptospirosis:** I do not recommend leptospirosis vaccine. Few cases of leptospirosis occur, and those are rarely caused by the two serovars in the vaccine; cross-reactive immunity to letospirosis does not occur.

CATS

Age at First Vaccination	Recommendation
6 to 8 weeks of age (I do not recommend routine vaccinations at an earlier age.)	**1st vaccination parenteral:** • Feline paleukopenia virus (FPLV) • Feline viral rhinotracheitis (FVR) and • Feline calicivirus (FCV) **2nd vaccine (2 to 3 weeks later):** • FPL parenteral • FVR/FCV intranasal **3rd vaccination :** • Same as second vaccination, plus • Rabies vaccine (RV)
9 to 13 weeks of age	**Give 2nd and 3rd set as listed above.**
Older than 13 weeks of age	**Give 3rd vaccination set as listed above.**

NOTES: **Chlamydia:** I do not recommend chlamydia vaccine. **FeLV:** I do not recommend feline leukemia vaccine. Instead I recommend that all cats be tested for viremia (FeLV positive) and positive cats be eliminated from the population if there is any chance they will come in contact with other cats. If FeLV vaccine is used for kittens I see no need for annual revaccination. **FIP:** I do not recommend feline infectious peritonitis vaccine. **FVR/FCV:** FVR/FCV could be repeated every 3 to 5 years, if the cat is taken to shows or boarded. **Rabies:** Vaccination should be repeated annually or every three years for rabies. Rabies should be given at a separate and different site than the other vaccines.

leukemia vaccine, ever, ever, ever," noted Dr. Mehan. "I don't even have it in my refrigerator. It has the potential to cause immune system depression, and it's not particularly effective."

Some diseases we vaccinate for are mild, explained Dr. McCluggage, "It's questionable whether you need to vaccinate for these mild diseases, or if it is preferable to allow the animal to experience the natural infection and produce stronger immunity." The bordatella vaccine in dogs and the feline upper respiratory diseases of rhinotracheitis and calici fall into this catagory.

"Using the bordatella vaccine, commonly called kennel cough, is particularly questionable. We are using a bacterial vaccine to protect against kennel cough, when we know that 70 to 90 percent of all the kennel cough in dogs is not due to bacterial, but instead is due to viruses. You must look at each vaccine individually, and the unique circumstances of your patient to decide which vaccines are necessary."

With so many vaccines available, it may be increasingly important for pet owners to be selective. "There is always the risk that a cat will get out the window and get hit by a car, but

we don't vaccinate against that. You can't prevent all risks; life is a risk," says Yarnall. "But putting something in the body that you can never take out—that's a risk."

Consumers' choices are only likely to become more complicated. "In the next five years, anticipate a number of new vaccines on the market," said Richard Ford, D.V.M., professor of medicine at the College of Veterinary Medicine, North Carolina State University. "A number of rather dramatic things are under study. The industry is aggressively looking at vaccines for heartworm, fleas, ehrlichiosis, Rocky Mountain spotted fever and even a contraceptive vaccine that could eliminate spaying and neutering yet allow you to breed the animal later. The pet owner will need to ask, 'Which of these are necessary?' "

NOSODES

As pet owners look for more natural alternatives, homeopathic preparations known as 'nosodes' are receiving increased attention as complements to—or perhaps even substitutes for—conventional vaccines. Unlike other homeopathic preparations, nosodes are not based on the theory that "like cures like." They are based on "same cures same." That is, minute quantities of a disease-causing substance are used to treat—and perhaps prevent—the disease itself. *(See "Homeopathic Healing" on page 12 for more information on nosodes.)*

"Basically, nosodes are homeopathic medicines made from either diseased tissue or exudations," explained Jay Borneman, spokesman for the American Homeopathic Pharmaceutical Association. "The material is manipulated quite a bit right after it is obtained, because it must be inactivated or rendered sterile. These processes are spelled out in the *Pharmacopoeia.*" The processed material is diluted and shaken, typically repeated 30 times or more, so that virtually no molecules of the original substance remain. According to homeopathic theory, the resulting remedy is more potent with each dilution.

A number of holistic veterinarians report good results using nosodes to prevent disease. "For dogs and cats, we have used nosodes for distemper, parvo, kennel cough, panleukopenia, rhinotracheitis, calici and [we've used] a feline

leukemia combination, which includes both feline infectious peritonitis and feline AIDS, and have had excellent results both treating and preventing with those nosodes," reported Dr. Mehan. "We had two breaks in immunity with puppies that hadn't completed the nosode program and came down with parvo, but numerous puppies that hadn't completed the vaccination schedule have come down with parvo as well. Our clinical experience shows nosodes are very effective."

In Dr. Pitcairn's practice, nosodes appear to have worked "as well as the vaccines or better," he observed. "We have been using [nosodes] for a number of years and have seen some dogs that have gotten parvo anyway, but just a few. This same thing happens with the vaccine. It might be that the virus changes and a new nosode has to be prepared every so often."

Dr. Carolyn Blakey, D.V.M., of Richmond, Indiana, used nosodes in a local animal shelter with which she was associated for more than a year. "Initially, we gave distemper and parvo nosodes to all the dogs and distemper and upper respiratory nosodes to all the cats comin in," she said. "For the first several months, we saw very few disease outbreaks. Then, over a longer period, we began to see more disease than we found acceptable. We began to give the animals one injectible vaccination and a nosode, and our disease breaks went way down—and stayed there."

Breeders as well as individual pet owners are exploring the concept of nosodes, Dr. Blakey noted. "Some people have put their entire kennels on the line, going nosode-only, and haven't vaccinated a puppy for two to three generations," she reported. "Some are getting spectacularly positive results. I think some negative results are out there, too, but we don't hear about them as much."

Despite such positive anecdotal evidence, a recent scientific study conducted by Dr. Schultz fails to support at least one nosode's promise as a prophylactic measure. "[We] found that the nosode for parvovirus provided no protection from parvovirus challenge," reported Dr. Schultz. "What the results showed is that before any nosode should be used as the only method of protecting an animal

from infectious disease, or as an alternative to conventional vaccines, it would have to be tested similarly to the vaccine it is replacing."

"At this point, many of us would say that not all parvo nosodes work, and we don't have any data to document for sure that any of them work," cautioned Jean Dodds, D.V.M., a veterinarian with a referral practice in immunology and hematology in Santa Monica, California. "We don't want people having a false sense of security about nosodes. That is not meant to negate their worth—it's just that we don't have good data at this point to support their use."

The use of nosodes to prevent illness is also the subject of some controversy in the homeopathic community, which has traditionally prescribed remedies based upon a patient's existing symptoms. "More often, homeopathy treats an individual that is actually ill," observed Joe Lillard, president of Washington Homeopathics in Bethesda, Maryland. "You see how an animal is responding, and give it the appropriate remedy for that response."

"It's far better to build up the health of an animal and to use nosodes only in the face of an epidemic or when it has actually been exposed to the disease," suggested Christina Chambreau, D.V.M., a holistic veterinarian in Sparks, Maryland. "When we look at how homeopathy works, that may be the most effective use, after the animal has been exposed. We know nosodes do not give 100 percent protection. The best protection seems to come from not vaccinating, feeding the animal a great diet of whole, fresh food and treating any symptoms when they appear."

EVALUATING THE RISKS

For pet owners, in the decision whether to vaccinate—and if so, for which illnesses—it is important to weigh the risks, experts advise. "It really is a cost-benefit situation," said Borneman of the AHPA. "In terms of my own pets, that's what I did. I looked at the benefits of the conventional approach and the benefits of the complementary approach, the relative costs, safety issues and what can one expect."

Clearly, some common-sense cautions apply. Most veterinarians agree, for instance, that vaccinations should not be given to an animal that is sick, facing surgery or that has previously had an adverse reaction to a particular vaccine. "We will not give a vaccine to any animal who is immunologically compromised, that is, if they have leukemia, cancer or chronic immune [deficiencies] such as skin problems," says Dr. Mehan. "If they are already struggling, it doesn't make sense to give something that might drag the system down or intensify an allergic response."

"If an animal has had a life-threatening reaction before, I can't ethically suggest they do it again," said Dr. Dodds. "Then the owner needs to use common sense and keep the animal away from other animals or areas where it might be exposed, to keep it reasonably protected."

The age of the animal may be a further consideration—although one that perhaps cuts both ways. "When animals are young is when it makes the most sense [to vaccinate], because that's when their immune system is

less developed and diseases like panleukopenia and parvovirus are most apt to be life-threatening," observed Dr. Blanco. "But it's really a Catch-22. When they are young, they are also quite susceptible to vaccine reactions, particularly when we vaccinate heavily and start early. Developing an illness is not always a bad thing for young animals. Many childhood diseases are really training grounds to develop the immune system."

Also, consider the lifestyles of your animals when deciding which immunizations are most critical. "The vaccination program must be tailored to the animal," says Dr. Schultz. "Does that cat ever get outside? Is it a single-cat household? Unfortunately, a lot of cats that will never see another cat are getting the feline leukemia vaccine every year, and these cats are probably at greater risk of reaction from the vaccine than from the disease. On the other hand, if you don't vaccinate for parvo, the risk of a puppy becoming infected is far greater than the risk of a vaccine-induced reaction. It depends on the disease, the conditions under which an animal is housed and the exposure conditions."

Even if you believe the risk of exposure is low, you must factor in the potential severity of the consequences if your animal is exposed. "You cannot make a blanket statement that all animals coast-to-coast need XYZ vaccine at a certain frequency," said Roger Schwartz, D.V.M., clinical research veterinarian with Hoechst Roussel Vet, Somerville, New Jersey. "Even if there is a one-in-a-thousand chance that your animal could be exposed to such a disease, are you willing to risk the consequences, which may be an 80 percent chance of death if exposed?"

"As a pet owner myself and as a veterinarian, I see many more animals that are harmed or die due to disease than I ever have from any sort of treatment or preventive medication," cautioned Dr. Bielsker of Solvay Animal Health. "Certain animals may experience hypersensitivity to a vaccine, but many more animals become ill or die a terrible death due to viruses such as parvovirus."

MAKING YOUR OWN CHOICE

To vaccinate or not to vaccinate? Ultimately, the decision is a very personal one. "What is most important is to pay attention to your animal, and to how you feel about giving vaccines," advised Dr. Chambreau. "Learn how many cases of each virus in the vaccine are actually seen in your area—what is the risk? Deciding to change your vaccination procedures is only one part of achieving better health for your animal. Start a comprehensive program to improve your animal's health that also includes better nutrition and treatment of the individual animal, not just its ailments."

You're not facing such questions alone. Talk to other pet owners about their experiences; have lunch with a breeder whose opinion you trust; and above all, discuss your concerns and questions with your veterinarian. Expect that arriving at the the 'right' answer—for you and your pets—is a process that takes time and research. "We offer people options, we tell them the pros and cons, and we tell them that nothing is a sure thing," emphasized Dr. Mehan. "We let them make their own decisions about what is appropriate for their animals. That's the way it should be." **NP**